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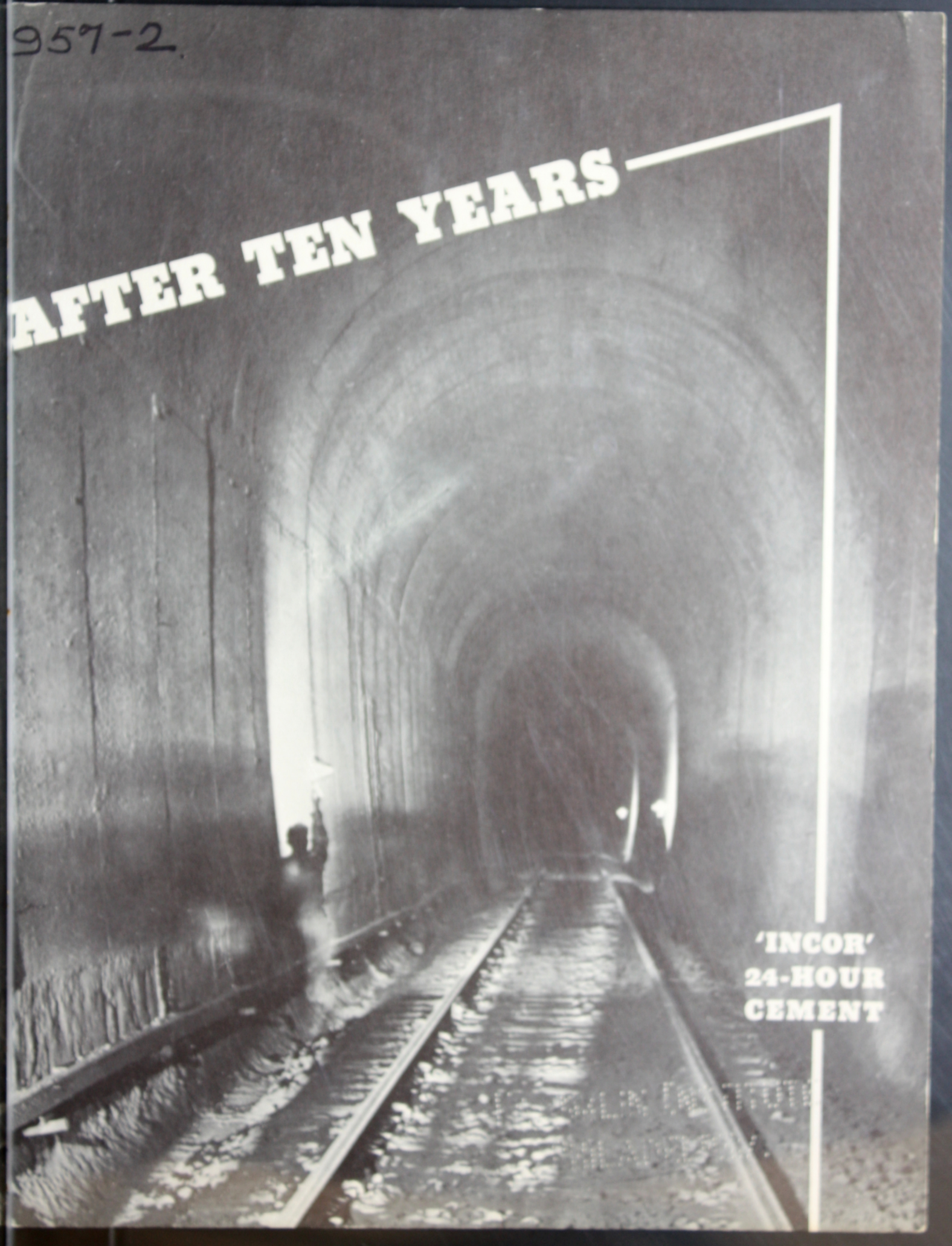


AFTER TEN YEARS—

THE SERVICE RECORD OF 'INCOR' 24-HOUR CEMENT

LONE STAR CEMENT CORPORATION

Manufacturers of
LONE STAR CEMENT
and
'INCOR' 24-HOUR CEMENT

OFFICES:
ALBANY
BIRMINGHAM
BOSTON
CHICAGO
DALLAS
HOUSTON
INDIANAPOLIS
KANSAS CITY
NEW ORLEANS
NEW YORK
NORFOLK
PHILADELPHIA
ST. LOUIS
WASHINGTON, D.C.

GENERAL OFFICES:
342 MADISON AVENUE
NEW YORK, N. Y.

A new era in concrete engineering opened when 'Incor' 24-Hour Cement was introduced, in 1927. Improved manufacturing methods had reduced the time required for concrete to attain service strength—and 5 to 7 days' curing then accomplished what had taken 10 to 21 days a decade before.

But the makers of Lone Star Cement saw the need for a *true* Portland Cement which would cure or harden thoroughly in 24 hours, and pioneered in this further forward step.

That was ten years ago. Today the strength and durability of 'Incor' concrete have been proven by a decade of use. Many miles of concrete paving and hundreds of concrete structures attest both the high early and high ultimate strengths of this improved Portland cement.

The record of service here presented shows that 'Incor' is producing the same kind of concrete that skilled contractors have been making with Lone Star Cement ever since 1900. For behind 'Incor' stands Lone Star's 37-year record for high quality and unvarying uniformity.

FOR A DECADE, 'Incor' concrete walls and roof sections in Moffat Tunnel have withstood pressures as high as 10 tons to the square foot. Shifting masses of earth and rock have been held in check. Ground waters have been effectively blocked off—'Incor' concrete, placed in 1927, is watertight, dense, impervious. Wood beams in other sections of the tunnel required constant repairs (cost, $75,000 a year) and were finally replaced with concrete; but 'Incor' supports a mountain—hasn't required a dollar's worth of maintenance.

VB332 25 NL CNT PNCT=DENVER COLO 6
F RAY BISSELL,CHAIRMAN INTERNATIONAL CEMENT CO=
342 MADISON AVE NEWYORK NY=

MOFFAT TUNNEL COMMISSION WANT URGENT DELIVERY 'INCOR' HIGH EARLY STRENGTH CEMENT FIFTEEN THOUSAND BARRELS TO WITHSTAND GREATEST PRESSURES EVER ENCOUNTERED IN ROCK TUNNEL WORK=
J VIPOND DAVIES.

THAT WAS OCTOBER 6, 1927

MOFFAT Tunnel was being driven through the Rocky Mountains. Work proceeded satisfactorily until engineers encountered the famous Ranch Creek fault, where shifting earth and rock exerted pressures estimated at 10 tons per square foot, compressing 6 x 10-inch timber blocks into half their thickness. To prevent cave-ins, steel beams were used to support the mountain, until reinforced concrete could take the load.

Ordinary concrete did not gain strength fast enough. Soft masses of earth and rock above the concrete were in constant motion—concrete requiring 7 to 10 days to harden might be destroyed.

'Incor' 24-Hour Cement was suggested. The telegram shown above was dispatched. And four carloads of the then newly-perfected high early strength Portland cement were started at once to the Moffat Tunnel.

There wasn't enough 'Incor' available for the entire job, but the Tunnel engineers took all they could get, and used it where pressures were greatest.

Invert forms were used for the roof. No admixtures were used. In 12 to 18 hours, forms were removed—and 'Incor' concrete held back the sagging mountain, supported the masses of

Driven 6.11 miles through the Rockies, Moffat Tunnel is an outstanding engineering accomplishment. Here 'Incor' concrete succeeded in supporting a mountain after all previous materials had failed. And here 'Incor' has withstood pressure as high as 10 tons per square foot for 10 years, without a sign of a flaw or a cent for maintenance. Photo shows train leaving East Portal.

shifting shale and earth. Side-walls were then placed. Work went ahead rapidly—all bracing was removed after concrete had been in place six days. Close examination showed no evidence of the tremendous pressures the concrete was withstanding. 'Incor' met its severest test. Proof of high early strength.

AFTER TEN YEARS

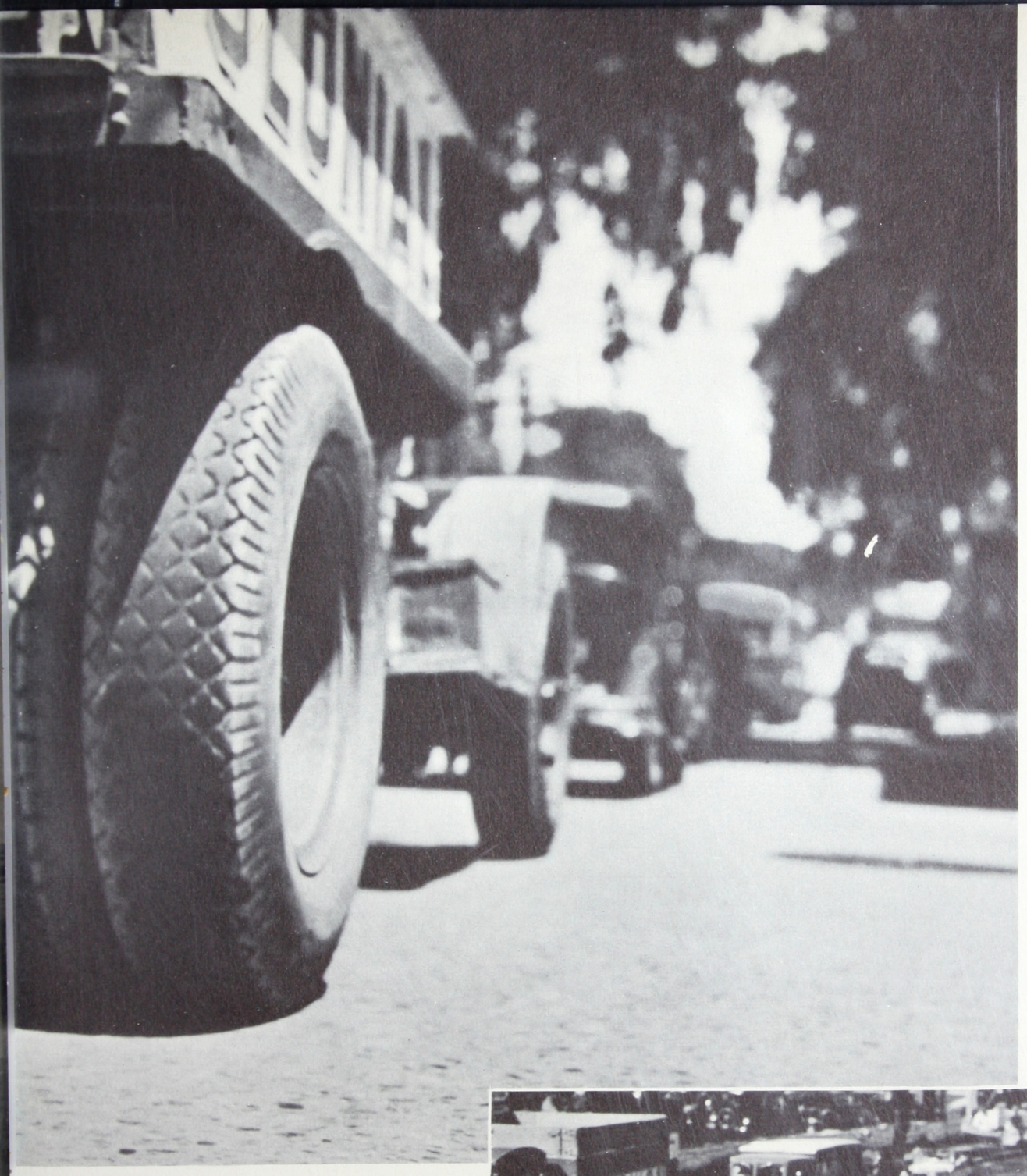
But what about ultimate strength and durability? The ten-year record speaks for itself. For a decade, 'Incor' has held in check "the greatest pressures ever encountered in rock-tunnel work." Running water, seeping down through the mountain above, has been kept out. To provide drainage, they had to bore through the concrete!

While wooden beams in other parts of the tunnel required constant repair and replacement (cost, $75,000 a year), 'Incor' supports a mountain—hasn't required a dollar's worth of maintenance since the day it was placed. Proof of high ultimate strength and durability.

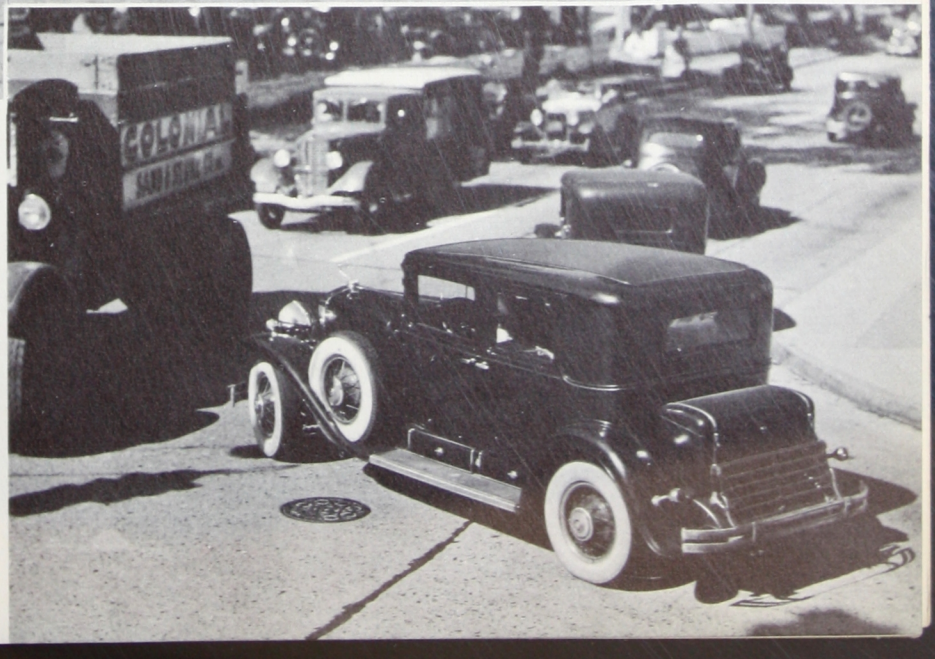
SINCE 1927— NO MAINTENANCE

In September, 1927, Pennsylvania Railroad completed an extensive relocating and double-tracking project on the New York-Pittsburgh-St. Louis main line. Bridge at Greenup, Ill., was the last to be completed. Twenty to 30 trains a day were scheduled for the new route —and savings to be obtained by the new double track, elimination of highway crossings and heavy grades, amounted to many dollars daily.

'Incor' was used for bridge-deck concrete.



Since 1928, 'Incor' paving at Main Street and Echo Avenue intersection (right) of Boston Post Road, New Rochelle, N.Y., has carried 20,000 vehicles a day, including New York-New England traffic, with heavy inter-city trucking. Close-up (above) shows concrete as sound as the day it was placed. Diagram, page 8, indicates both early and ultimate strengths.



Left, Spirit of St. Louis, doing eighty, about to cross P.R.R. bridge, Greenup, Ill., concreted with 'Incor' in 1927. In service 3 weeks sooner—no concrete maintenance in ten years.

Concrete was poured on a Monday; tracks laid Tuesday and Wednesday. A work-train passed over the bridge Thursday, and main-line traffic followed as soon as connections could be made. The entire stretch of track was opened three weeks sooner, because 'Incor' did away with dead time waiting for concrete to harden.

Since then, the 'Incor' bridge deck has withstood the pounding and vibration of 20 to 30 trains a day, including 80-mile-an-hour express trains like the "Spirit of St. Louis"—almost 10 years, no maintenance.

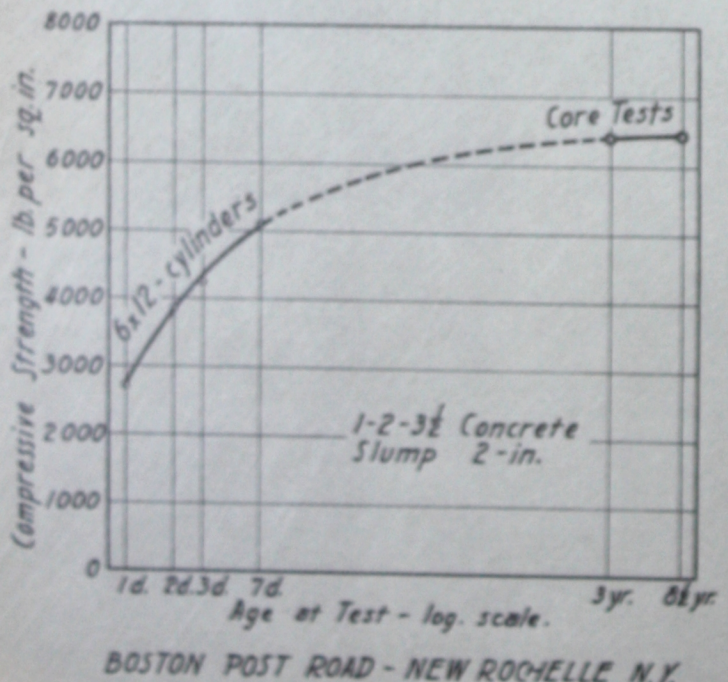
CORE TESTS SHOW HIGH ULTIMATE STRENGTHS

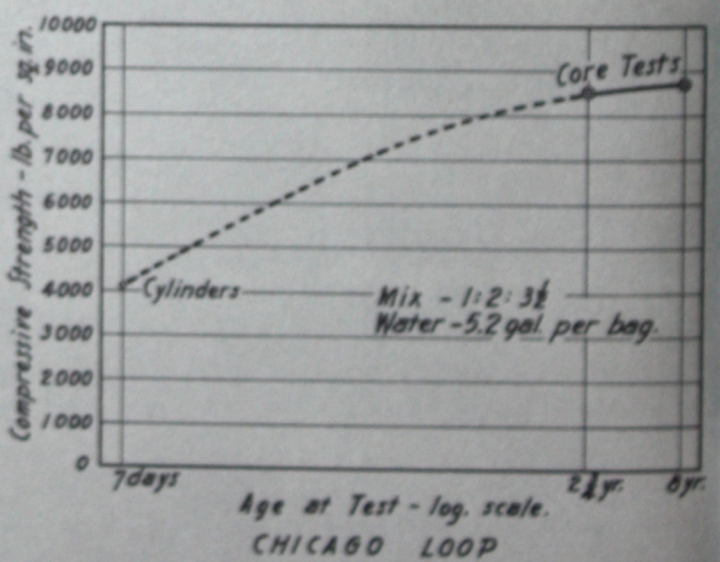
Typical of 'Incor's ten-year record throughout the country, on all types of construction. Thus, in August, 1928, Main Street and Echo Avenue intersection of Boston Post Road, New Rochelle, N. Y., traffic count 20,000 cars a day, was repaved—part with 'Incor', the remainder with ordinary concrete.

Cylinders, molded as the job progressed, were tested 24 hours after 'Incor' concrete was poured. Engineers watched results critically. 'Incor', one day old, showed a compressive strength of 2710 lbs. Ten minutes after tests were completed, the highway was opened to some of the nation's heaviest traffic. Two hours after opening, a 30-ton steam-shovel, on a carrier weighing ten tons net, was hauled over the 'Incor' concrete—a pretty severe practical test.

In 1931, engineers who witnessed the one-day tests, saw three-year cores average 6417 lbs. per sq. in., when tested. At 8½ years,

HIGH ULTIMATE STRENGTH, TOO





Diagram, at left, shows high early and high ultimate strengths of 'Incor' concrete, placed in 1928, Boston Post Road, New Rochelle, N.Y. Above, similar data for 'Incor' concrete, placed in Chicago Loop during cold weather, 1928.

Here, LaSalle Street—main artery from the North Side to Chicago's financial district—crosses Washington Street, important east-west highway. Close-up view of 'Incor' paving, left, placed October, 1928, shows no evidence of wear, in spite of 15,000-car-a-day traffic. Maintenance cost, none. Cored August, 1936, 'Incor' strengths averaged 8696 lbs. per sq. in. —1296 lbs. per sq. in. higher than ordinary concrete, placed at same time.

'Incor' cores averaged 6436 lbs. At these ages, cores of the ordinary concrete tested 5516 and 6065 lbs., respectively.

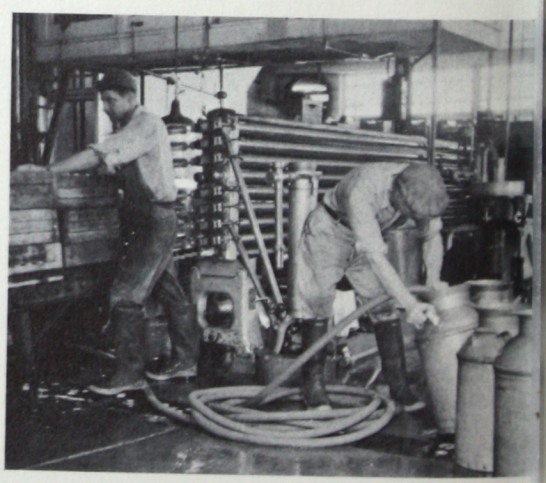
Then, in October, 1928, City Engineers used 'Incor' to repave Washington and North LaSalle Street intersection in Chicago's Loop —traffic count 15,000 cars daily. Late on a Saturday, 'Incor' was placed on half the intersection. Weather was cold and sleet was falling, but this concrete was opened to traffic first thing Monday morning. Ordinary concrete, used on the other half of the intersection, was opened 7 days later. 'Incor' saved a prolonged traffic snarl.

In August, 1936, both concrete sections were cored. 'Incor' cores averaged 8696 lbs. per sq. in.; the other concrete averaged 7400 lbs. Illustrating the two-way advantage of 'Incor' Cement—both high-early and high-ultimate strengths, with equal dependability.

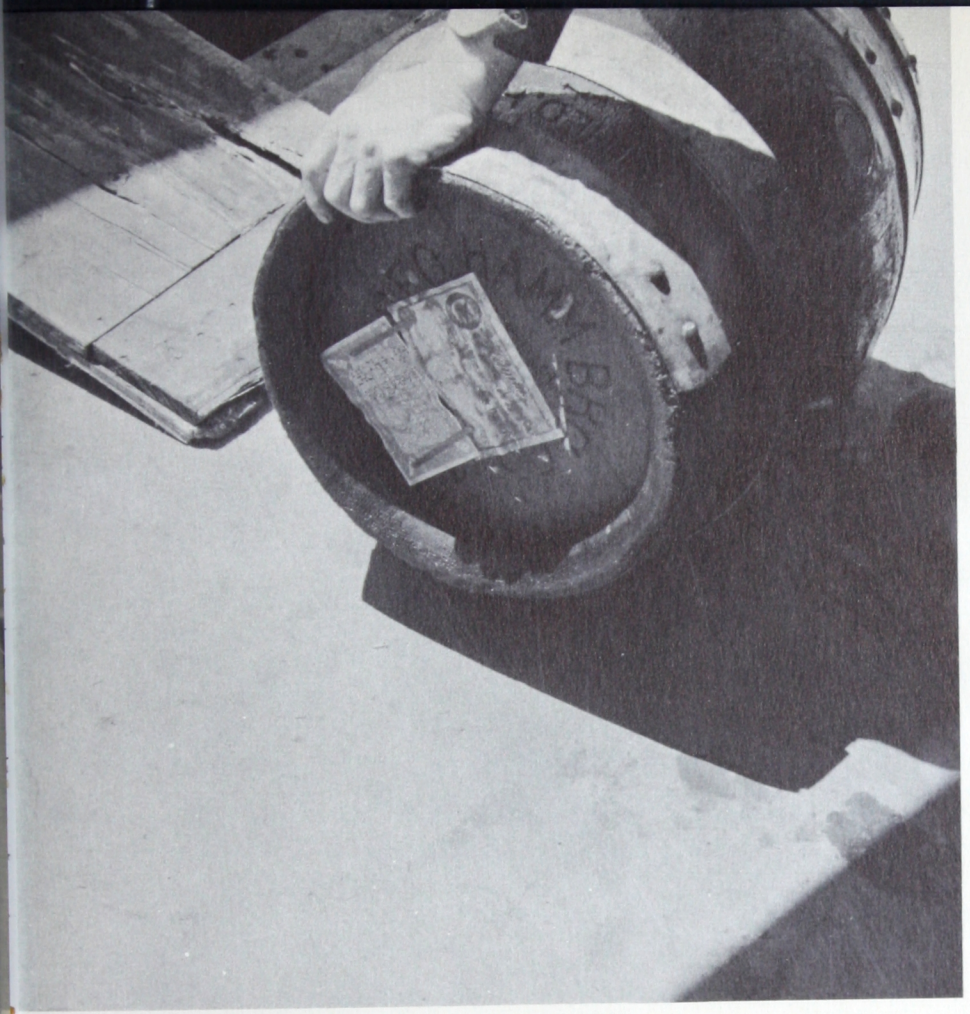
RECORD IN HEAVY-DUTY FLOOR SERVICE

In 1929, 'Incor' began to attract attention of factory-owners, dairymen, and others interested in longer-wearing, more watertight concrete. One of the first to make use of 'Incor's not-a-working-day-lost schedule of floor-replacement was Walnut Grove Dairy, Alton, Ill. Floor slab then in use, badly cracked and settled, required constant patching. Equally important, a cracked floor cannot be properly cleaned—and dairies must meet strict sanitary requirements.

But business was good, and the floor could not be kept out of use. Operations were planned to make full use of 'Incor's high early



'Incor' enabled contractors to resurface this dairy floor without interrupting plant operations. At moderate cost, the owner replaced a worn-out, cracked, unsanitary floor—constant source of trouble and expense—with one that is smooth, sanitary, easily kept clean, and hasn't cost a cent for maintenance in nearly 8 years of heavy-duty service.



Close-up of 'Incor' loading dock (left) at Mutual Ice & Cold Storage plant, Topeka, Kan., placed in 1928. Under hardest service—steel-wheeled hand-trucks, barrels bumping out of freight cars—this concrete, inspected 8 years later, discloses no signs of wear. (Below) Another view of 'Incor' loading dock.

strength; the floor was replaced in four sections, working only between 3 p.m. and 5 a.m.

Pouring began at midnight; concrete was tamped into place and properly finished; at 3 a.m., a day's work was completed. At 5 a.m. the surface was hard; light boards were then laid on the new concrete and plant operations resumed. When the boards were removed, within 24 hours, the 'Incor' surface was unmarred—no marks even where filled milk cans had been dragged off the boards and onto the freshly-placed concrete.

How did the floor stand up? Nearly 8 years after the floor was resurfaced, careful inspection shows 'Incor' concrete to be good as new. Exposed to milk spill, heavy cans rolled across the concrete 19 hours every day—not a cent for maintenance. Truly, heavy-duty concrete.

LOADING DOCK TAKES A TERRIFIC BEATING

Cold-storage companies, creameries, laundries, freight depots, packing houses—plant operators in general—demand plus values in concrete. And they get it when 'Incor' is used for floor slabs, loading docks, driveways and in other places where both durability and strength are essential. During construction, 'Incor' saves expensive delays that tie up business; in service, 'Incor' stands up under the daily grind, giving years of expense-free service.

Case in point is the loading dock of Mutual Ice & Cold Storage Plant at Topeka, Kan., constructed in September, 1928. Inspected 8 years later, the 'Incor' concrete was found to be in perfect condition. Photograph, at top of

(Right) Loading platform, Indiana Railroad Freight Terminal, Indianapolis, resurfaced with 'Incor' in 1927; in perfect condition today, after nearly ten years in constant use.

(Left) Close-up of 'Incor' concrete driveway of Central Cold Storage Company, Clark Street, Chicago. Over 7 years of constant service—carrying 200 trucks a day, some weighing 20 tons—'Incor' concrete good as new . . .'Incor' enabled contractor to complete job in two weeks instead of nine, saved almost two months' construction time.

preceding page, indicates the wear to which 'Incor' has been subjected. Proof of the value of better job-curing with 'Incor'—of 'Incor's ability to make better, longer-wearing concrete, because it cures thoroughly in the short time concrete can be kept wet under job conditions. At 24 to 48 hours, 'Incor' is as thoroughly cured as ordinary concrete at 7 to 10 days. That means better concrete, 6 to 8 days sooner.

200 TRUCKS A DAY FOR 7 YEARS—NO UPKEEP

"No maintenance required." So, too, reads the inspection report on eight 'Incor' driveways built for Central Cold Storage Company, Chicago, in 1929.

Street level was being changed, and it was necessary to rebuild sub-structures and paving over a sidewalk-vault and basement. Six driveways had to be kept in constant use. With ordinary concrete, each driveway would have been out of service 16 days, counting time required to wreck and replace supporting structures. That meant nine weeks to complete the job. With 'Incor', each driveway was placed in service in 48 hours—the entire job took only two weeks. Two advantages to the owner:

(1) Constant access to driveways—full use of facilities almost two months sooner; (2) longer-wearing concrete, no upkeep expense.

9 YEARS' SERVICE— NO MAINTENANCE

Indiana Railroad Company reports 78,000 tons of freight passed over the 'Incor' concrete load-

ing-platform at Indianapolis Freight Terminal in the year ended August 31, 1936. It was less-than-carload business—everything from oil drums to portable garages—and put plenty of pressure on the steel truck wheels. But the 'Incor' concrete platform floor, placed in 1927, is still in excellent shape. Nearly 10 years' service—no maintenance.

Reason for using 'Incor': Old wood deck was badly worn, had to be replaced. There was no other platform available, so the new structure had to be built without interrupting service.

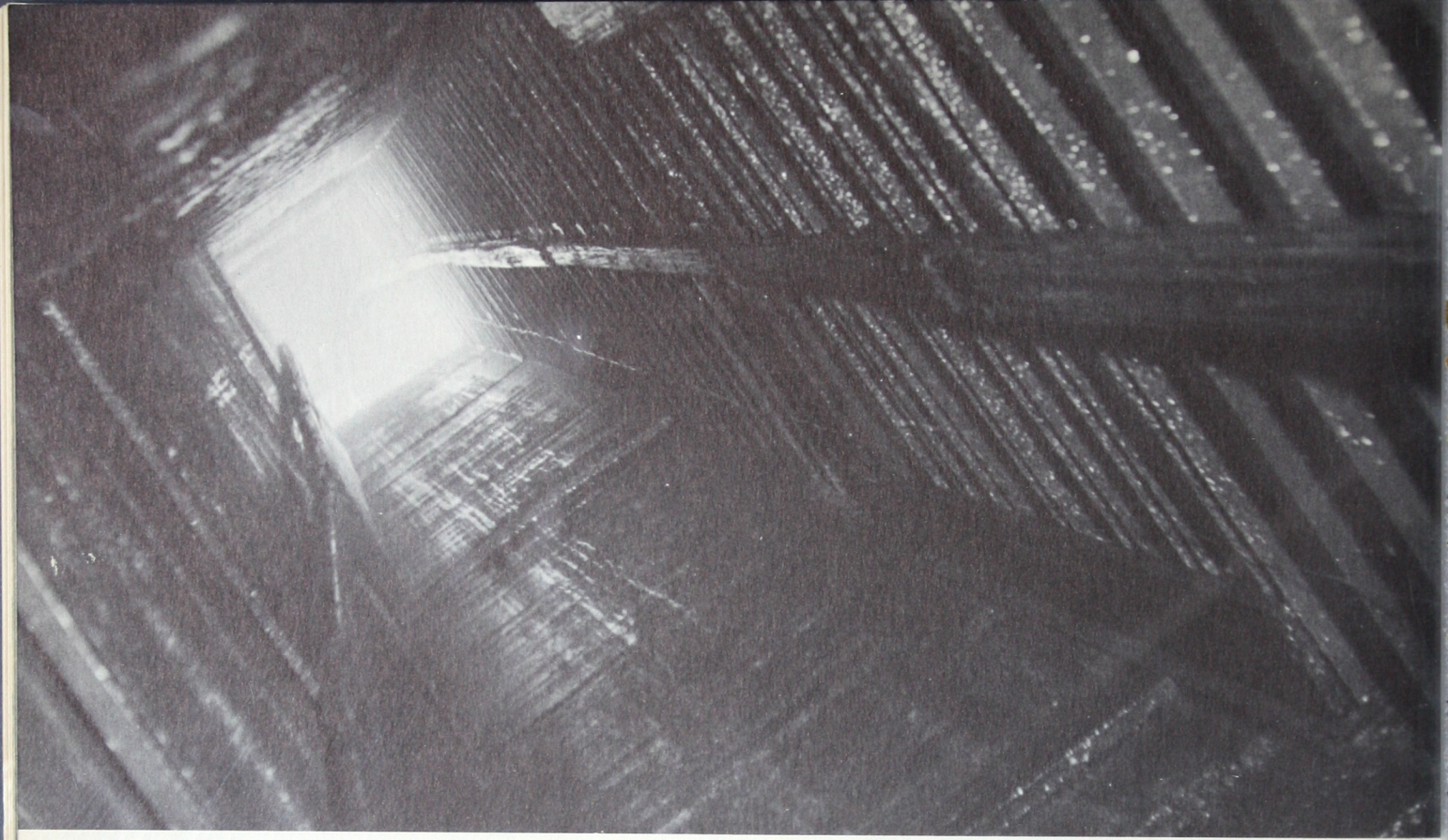
'Incor' solved the problem. On Saturday afternoon the railway's construction gang began work. Early Monday morning the new concrete was in use; not a working day lost; no interference with freight service. And, as a plus value, the concrete is in excellent condition today, good for many years to come.

WATERTIGHT SINCE 1929 —IN A COAL MINE

After ten years, many structures which keep water in or out, clearly demonstrate the greater watertightness of well-made 'Incor' concrete.

Case in point is the mine shaft of Mercantile Coal & Mining Co., Richmond, Mo. Quicksand and water 50 feet below surface made timber bracing ineffective. Ordinary concrete gained strength too slowly, so 'Incor' was used.

Concrete was placed in four-foot sections. When the shaft extended above the surface, the concrete lining was forced down with a 30-ton weight. A cave-in at the 70-foot level threw the shaft six feet out of plumb. Two hundred



Quicksand and water have been held in check since 1929 by this Richmond, Mo., 'Incor' mine-shaft lining. 'Incor' enabled Mercantile Coal & Mining Co. to complete the job three months sooner.

tons pressure was applied to force the shaft back in place—without concrete failure.

For more than seven years, pressures of water and quicksand have been held in check. "Still watertight," reports F. R. Atwill, Manager, Mercantile Coal & Mining Company—still watertight, without a dollar for waterproofing or repairs.

EXPOSED TO SEA FOR 8 YEARS

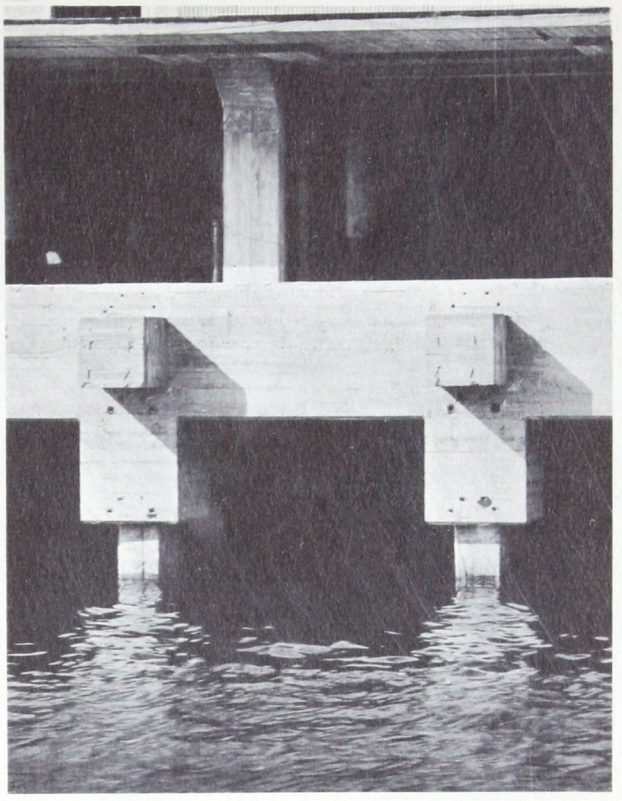
Today, engineers also specify 'Incor' for concrete exposed to salt-water action, because ex-

perience shows that 'Incor' concrete, properly made, is not only inherently watertight, but successfully withstands the chemical action of sea-water.

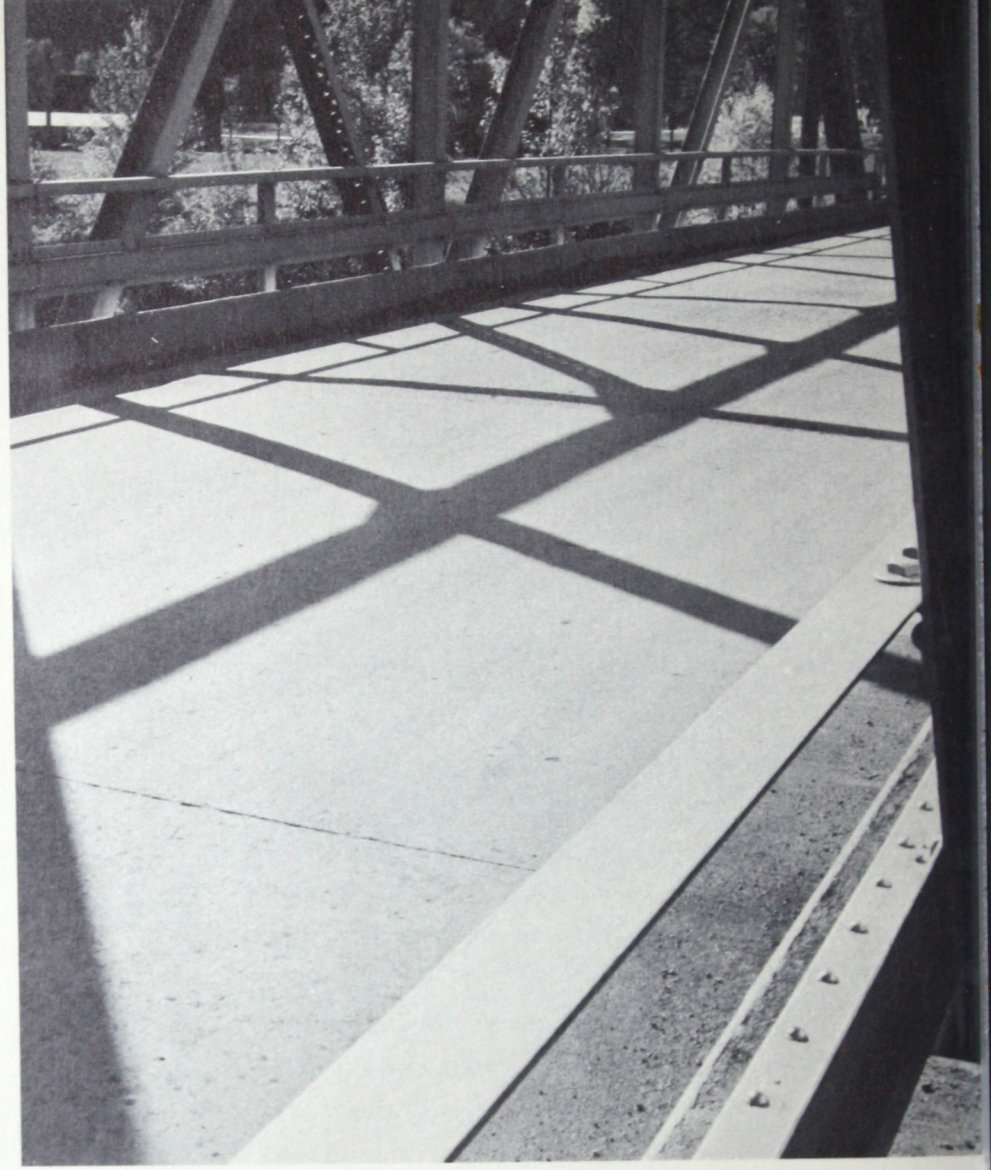
In 1928, when Tampa, Fla., Union Terminal was constructed, 'Incor' was used because it also offered a cheaper method of constructing dock piling and slabs. Behind-schedule construction of a 200-ft. section of the dock threatened to delay opening. Delay meant interference with shipping—and tying up a $3,000,000 investment. 'Incor' put the job back on schedule.

'Incor' concrete piles, lifted three days after casting, were driven to refusal 24 hours later, without sign of fracture. Dock work followed immediately, with forms stripped four days after pouring. Result, job completed 21 days sooner—saving $10,000 in job overhead and rentals alone.

Recent inspection of dock-slab and piling shows 'Incor' is providing the kind of expense-free service owners want; watertightness prevents damage by sea-water action and sea



Close-up of 18″ x 18″ x 60′ 'Incor' piling, driven to refusal 4 days after pouring. 'Incor' saved $10,000 in job overhead and rentals when Tampa Union Terminal Dock was constructed in 1928. Watertightness demonstrated by excellent condition today, after 8 years' sea-water exposure. Scores of other seacoast structures, from Galveston, Texas, to Portland, Maine, testify to the durability of concrete made with 'Incor.'



(Right) Close-up of the 'Incor' concrete deck of Hastings Bridge, St. Johnsbury, Vt. Poured in November, 1928, temperature 28°, and exposed to heavy traffic for more than eight years, concrete is in first-class condition today. (Above) Another view of Hastings Bridge. Contractors saved $300 by using 'Incor' on this job, and solved a detour problem by opening bridge to traffic 8 days sooner.

growths; greater durability has withstood constant trucking—concrete in first-class condition after 8 years' exposure.

PLACED AT 28° IN 1928; PERFECT CONDITION TODAY

Temperature fell to 28 degrees when 'Incor' deck slab was placed on the Hastings Bridge, St. Johnsbury, Vermont, in November, 1928. "Looks O.K. now, but will it last?" engineers said. For proper winter curing is difficult; sometimes, applied heat dries concrete out too quickly—resulting in inferior work that soon shows signs of wear; or, if insufficient heat is used, concrete may freeze before it hardens sufficiently—again resulting unfavorably. But, after more than 8 years, this bridge deck shows no sign of wear; nothing has been spent for concrete maintenance.

'Incor' takes the hazard out of cold-weather concreting, because it cures or hardens in one-fifth the usual time. Result, heat-protection costs are 60 to 70 per cent lower—form re-use is speeded up, one set does the work of several—work proceeds almost on summer schedules. 'Incor' makes year-around building an economical reality.

7 YEARS, NO UPKEEP, ON CAR-TRACK PAVING

Concrete car-track paving, placed by Topeka, Kan., Street Railway System in 1929, looks as smooth and free from wear as if it had just been laid. About 1200 vehicles an hour pass over this concrete. On October 5, 1936, Kansas Power & Light Company wrote: " 'Incor' slab installed in 1929 on our street railway right-of-way has proved very satisfactory. Our maintenance at that point has been practically nothing."

Here 'Incor' was used with one thought uppermost in mind—to speed up work, enable the company to clear the streets and obtain early use of the track. The 'Incor' concrete was under traffic within 24 hours after it was placed. Years of expense-free service confirm the wisdom of the engineers' selection.

No maintenance here: This Topeka, Kan., car-track paving was placed in 1929. Photo (above) shows present condition. (Below) Traffic count, 1174 vehicles an hour—'Incor' concrete good as new after nearly 8 years' service.

Canal Street, New Orleans, scene of Mardi Gras. 'Incor' repaving without traffic interruption, saved merchants $200,000 trade loss in 1929. No upkeep expense, concrete good as new, after 8 years' hard wear.

MERCHANTS SAVED $200,000 —NOT A CENT FOR UPKEEP

To tie up Canal Street, New Orleans, at Mardi Gras time would be like barricading New York's Broadway on New Year's Eve. Yet, in December, 1929, New Orleans contracted to repave Canal Street from Claiborne Street to the River —18 blocks of paving, with 21-ft. sidewalks.

Merchants demanded quick action. Forty-nine thousand square yards of pavement and 45,000 square yards of sidewalks and neutral zone paving had to be constructed—but constructed with "business as usual." Ordinary Portland cement meant several months of demoralized business; traffic would have to be re-routed; and Mardi Gras, only a few weeks off, intensified the problem.

So 'Incor' was used throughout the job. Paved a section at a time—opened the next day—concrete work went forward rapidly. Each block was finished 11 days sooner. Car service was normal. Merchants estimated 'Incor' saved them at least $200,000 net profit on sales that would have been lost had the street been barricaded while ordinary concrete hardened.

Today, after more than 7 years, taxpayers share merchants' satisfaction—for the 'Incor' concrete is good as new—not a cent for maintenance!

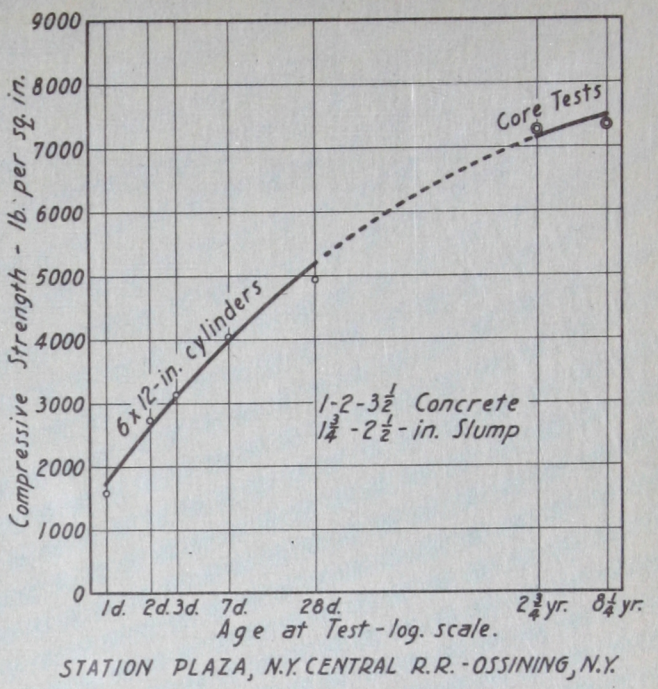
SO, BETTER CEMENT DOES MAKE BETTER CONCRETE

Low night temperatures prevailed, back in October, 1928, when New York Central Railroad

station plaza at Ossining, N. Y., was repaved with 'Incor.' To avoid traffic tie-up, paving was laid in 70 sections, each section opened to traffic in 24 hours. A huge electric transformer was trucked over 36-hour-old 'Incor' slabs without damage to the freshly-placed concrete. Entire job was completed in 10 days—30 days sooner than possible with ordinary concrete.

In spite of heavy traffic, 'Incor' concrete is as smooth and sound as opening day. And that, in a nutshell, is the service record of 'Incor' in all classes of construction, under pitiless wear and gruelling exposure. For these are not hand-picked jobs—they are fairly and squarely typical of the kind of service 'Incor' is giving.

Truly, then, this better Portland cement *does* make better concrete.



Ossining, N. Y., Station Plaza (below) was replaced with 'Incor' in October, 1928. Nights were cold but concrete was opened to traffic in 24 hours. Present condition—smooth and sound as day it was placed. Diagram (above) shows high ultimate as well as early strength with 'Incor'—better service, any way you look at it.

WHAT THE RECORD PROVES

The ten-year record of 'Incor' 24-Hour Cement surprises no one who is familiar with the care and skill with which the product is made. For durability and uniformity are built into the cement at the factory. Before a single barrel of 'Incor' was ever shipped, laboratory investigations showed that 'Incor' concrete would have exceptional strength and wear-resistance. The test of time now confirms these findings. In brief, here is what this record of a decade of service means to the specifier and user of concrete.

1. 24-HOUR SERVICE STRENGTH—Reduced curing costs . . . Faster follow-up operations . . . Marked winter economies.

Minimized flood hazard, frost-damage and cave-in risks.

Earlier occupancy . . . Uninterrupted use during plant remodeling and repairs . . . No plant tie-ups.

Less traffic disruption on streets and highways, fewer detours, substantial savings to the motoring public. Minimized loss to property owners; fewer lost sales for business men.

2. EARLIER FORM REMOVAL—Overhead and non-productive time reduced . . . Labor efficiency increased . . . Form economies—less lumber and benchwork.

3. BETTER CONCRETE—Greater workability, easier-to-place concrete, less expense for finishing . . . Better wearing quality, greater durability.

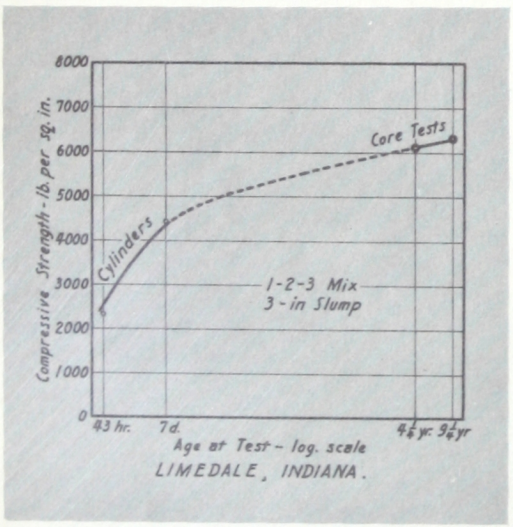
4. MORE WATERTIGHT CONCRETE—Thorough curing in 1 to 2 days (instead of 7 to 10 days); reduced curing costs; no admixtures needed. Assured results, better service.

The net of it is that 'Incor' has made concrete a ready-to-use construction material—at the same time providing in finished concrete all those qualities of strength, durability and watertightness which have made Lone Star Cement the standard of quality for more than 35 years.

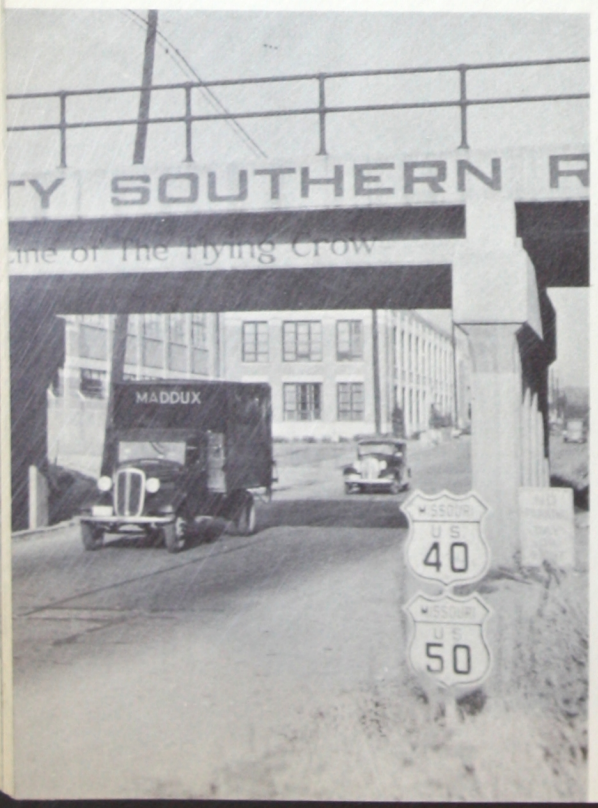
Two Portland cements to meet every structural requirement—use 'Incor' when it shows you a profit; otherwise, use Lone Star Cement. You gain either way, because better cement makes better concrete.

AFTER TEN YEARS IN HIGHWAY SERVICE

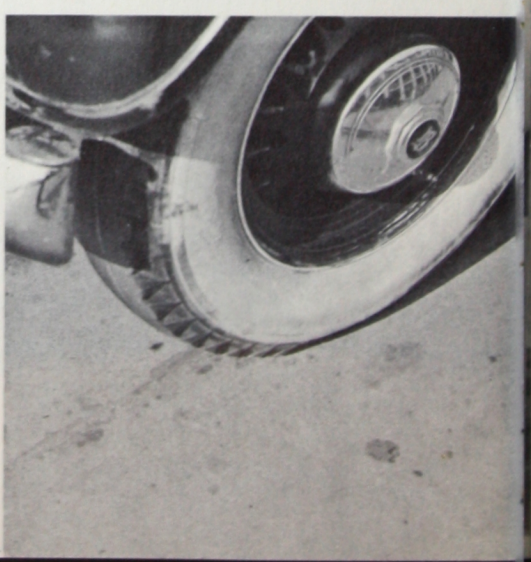
TO AVOID 40-MILE DETOUR, 4500 bbls. of 'Incor' 24-Hour Cement were used in repaving Lincoln Highway, near Ligonier, Pa., in 1929. Traffic, 3600 vehicles daily—summer week-ends 8500 cars a day; heavy truck traffic, day and night. In winter, snow and ice, grinding tire chains. Tough service, a stern test of concrete. Yet, the 'Incor' surface is as smooth and sound as the day it was opened. Typical of 'Incor's ten-year record in highway service.



TO AVOID DELAY to cement shipments, Manhattan Road intersection near Lone Star Cement mill, Limedale, Ind., was repaved with 'Incor' in 1927. Weather was cold, rainy; so concrete was opened in 40 hours, when 2100 bbls. of cement in Mack trucks, 75 sacks to the truck, bumped up onto the pavement, without injury to the concrete—then or later. Diagram (left) shows ultimate as well as early strength.

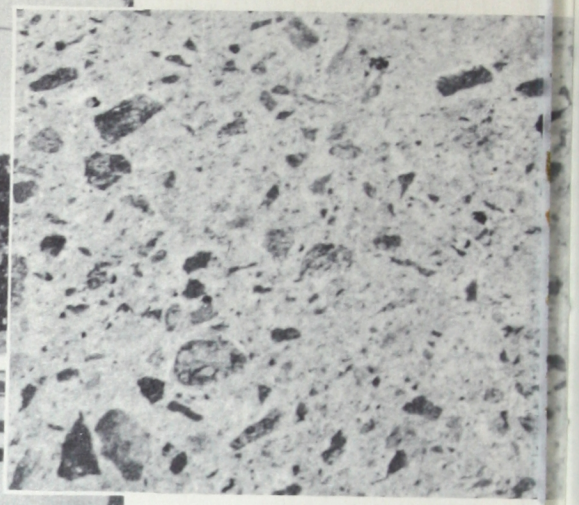


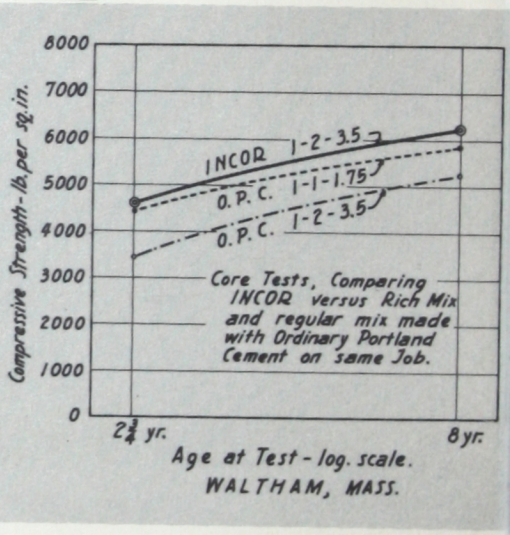
15,000 CARS A DAY use U. S. Route 40 at Kansas City Chevrolet plant (above). Resurfaced with 'Incor' in 1928 to avoid traffic tangle, concrete is in first-class shape today, as close-up (right) clearly shows; no maintenance. 'Incor', also used in adjacent Kansas City Southern overpass, reduced form costs and minimized "slow-order" operation.



OPENED IN 24 HOURS, 'Incor' prevented serious traffic disruption in 1928, while resurfacing Blue Mound Road (left), 4-lane highway, west out of Milwaukee, at Glen View Avenue intersection, Wauwatosa. Close-up (above) shows concrete in first-class condition today; no maintenance.

RAINY SEASON "GUMBO" DETOUR was avoided in 1928, by using 'Incor' for intersections on Old Spanish Trail (below), Fort Bend County, Texas. Subsequent subgrade settlement was corrected with mud-jacks. But 'Incor' concrete still provides good riding surface. Close-up photo (right) shows practically no wear—finishing marks still visible.

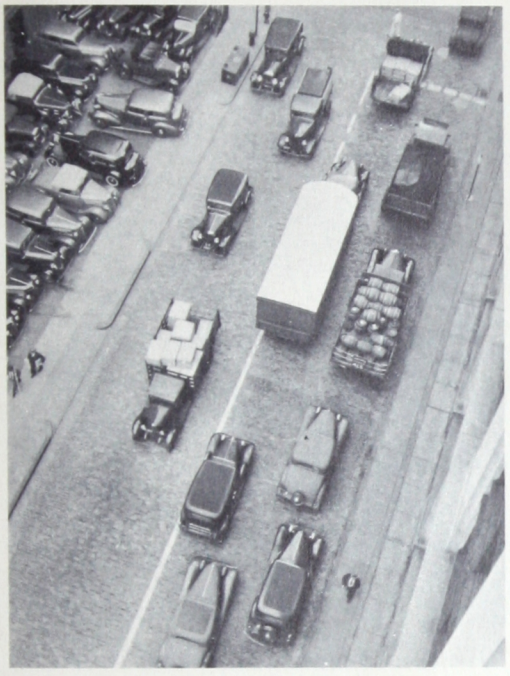




MASSACHUSETTS PUBLIC WORKS DEPARTMENT first used 'Incor' in 1928, to repave sections of Main Street, Waltham, Mass. Concrete opened in 24 to 36 hours. Traffic count, 8000 cars, 1500 trucks daily. 'Incor' in excellent condition today, as close-up (upper right) shows. Curve (right) indicates progressive strength development, comparing 'Incor' with rich-mix ordinary concrete on same project.

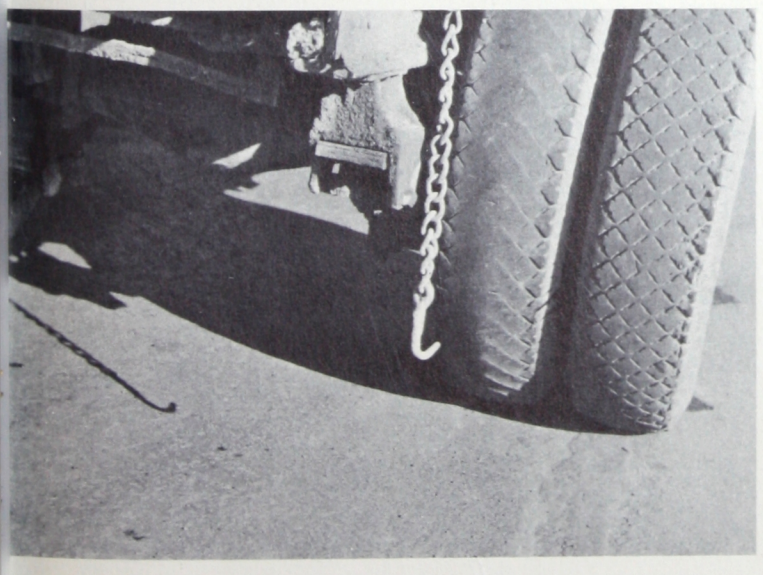
IN SUB-FREEZING WEATHER, winter 1928, Pennsylvania Highway Department widened and resurfaced "Bottleneck" Highway, west bank Susquehanna River, opposite Harrisburg. Detour impossible, as photograph (left), suggests. 'Incor' concrete, covered with burlap and straw, was opened in 24 hours, as necessary to maintain uninterrupted half-way traffic, 17,000 cars daily. Condition report: "As good as day concrete was opened."

STREETS AND ALLEYS



EXCHANGE STREET, BOSTON, grouted with 'Incor' in 1928, was opened 6 days sooner, saving traffic congestion and business loss to merchants. 'Incor' is as strong as the granite paving which it binds—taking the wear of 15,000 vehicles a day.

UNINTERRUPTED USE OF INDUSTRIAL STREETS, essential to modern business, is assured by using 'Incor'—better concrete, too, as demonstrated by this Kansas City industrial alley, connecting 13th and 14th Streets, serving a leading hotel and provision house. Concreted in 1928, opened in 24 hours—no maintenance, except for utility openings.

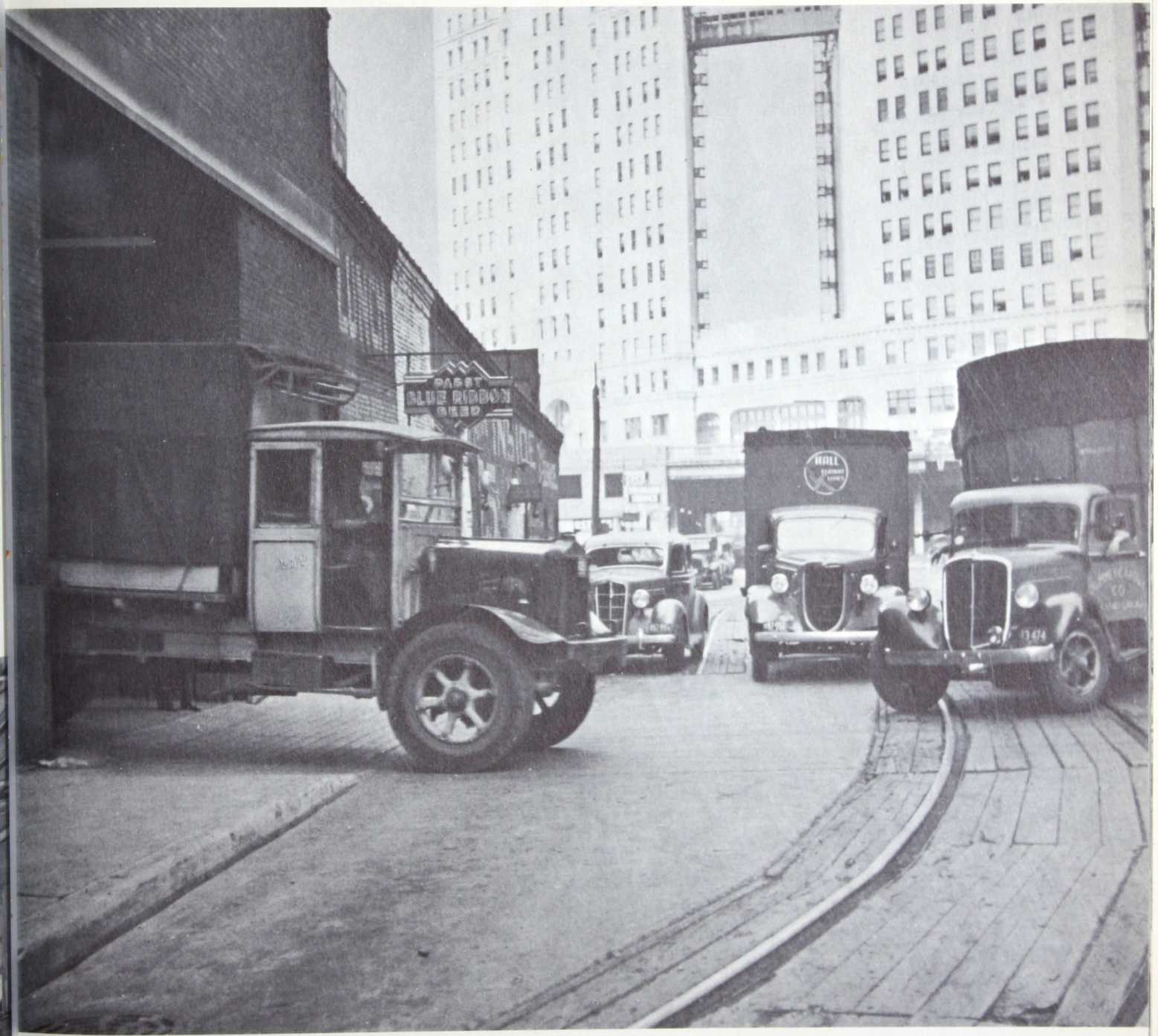


BUSIEST THOROUGHFARE in Washington's principal industrial section, "K" Street, N.W., near Lone Star's District of Columbia warehouse (right) was resurfaced with 'Incor', avoiding costly disruption of heavy business traffic. Placed in 1929; close examination (see above) shows concrete in excellent condition, under traffic of 3876 vehicles, mostly trucks, every working day.

WHEELS, WHEELS, WHEELS —steel-tired baggage trucks grind 'Incor' concrete platform, South Station, Boston; millions of passengers tread the surface. Placed in 1929, 'Incor' prevented traffic delays. Concrete as smooth and sound as day it was placed, eight years ago.

HEAVY-DUTY CONCRETE FLOOR in A. B. & C. R. R. freight depot, Atlanta (right) surfaced with 'Incor' in 1930, good as new today. 'Incor' also used in substructure: first-half forms, removed in 24 hours, were re-used for other half. Job completed weeks sooner.

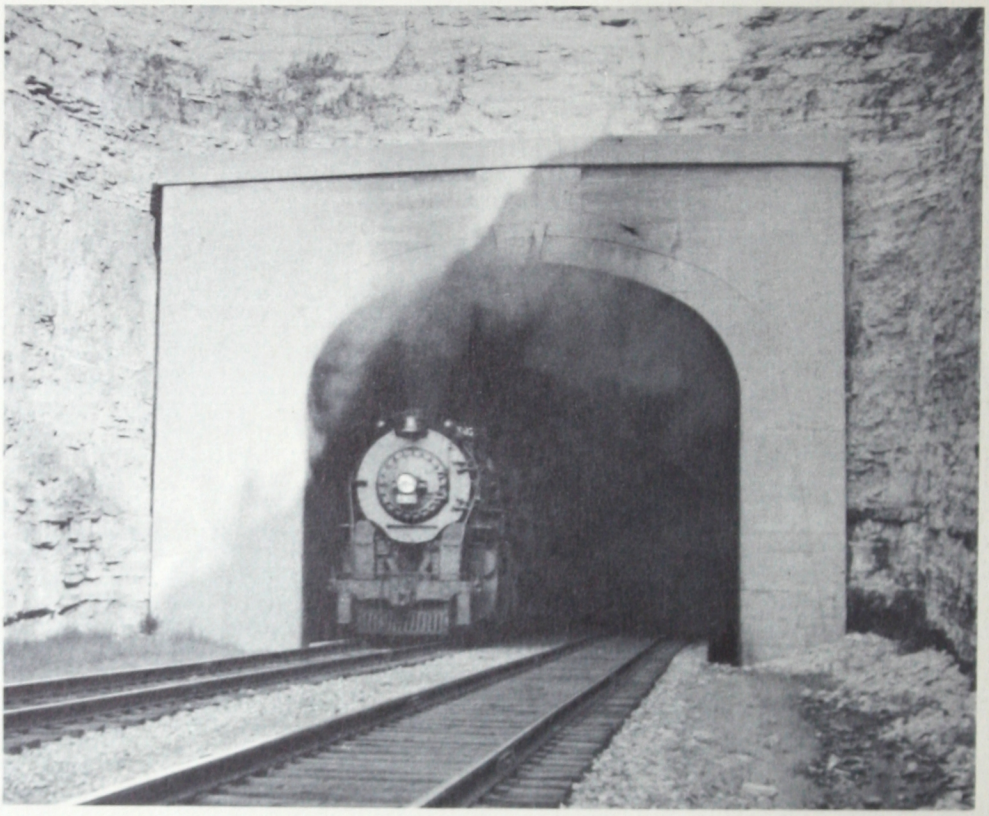
TWO SAVINGS TO INDUSTRY



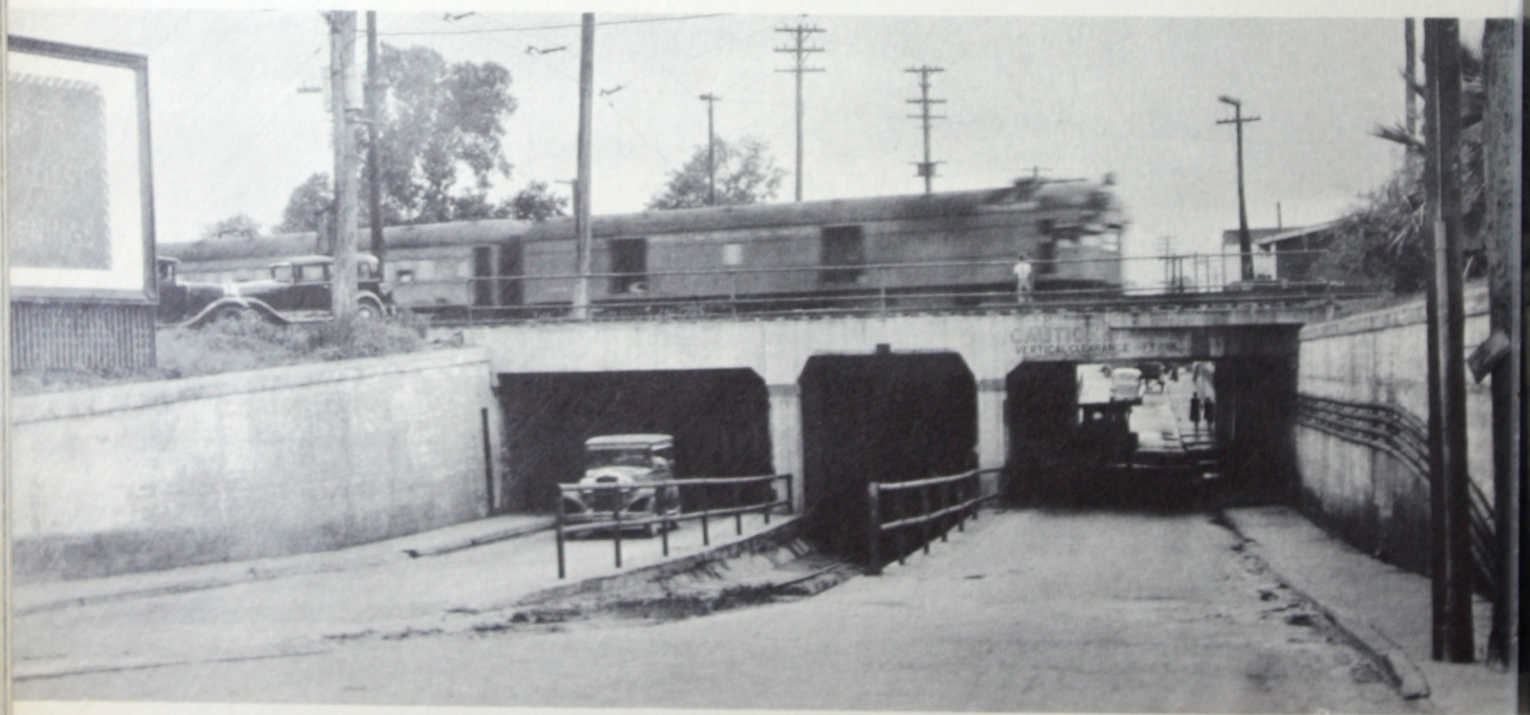
AN ALMOST CONTINUOUS STREAM OF TRUCKS uses this driveway to Hibbard, Spencer & Bartlett's Chicago warehouse. In 1929, old water-bound macadam surface was replaced with 'Incor.' Placed Saturday and Sunday, opened 23 hours after last pour—no business interruption. Concrete shows no sign of wear, after 8 years' hard service. Illustrating 'Incor's two-way saving to industry—(1) by eliminating costly interference with plant operation; (2) by economies through long, expense-free service.

RAILROAD OPERATING ECONOMIES

MISSOURI PACIFIC Tunnel, Grays Summit, Mo., built in 1929, part of new double-track cut-off, St. Louis to Jefferson City. Tunnel completion determined date cut-off could be placed in service. Using 'Incor', one set of forms sufficed; the single form section was moved forward 12 to 24 hours after placing concrete; lining followed closely on drilling operations. Weeks were saved. 'Incor' helped minimize costly operating delays; and tunnel concrete is in first-class condition today; no maintenance.

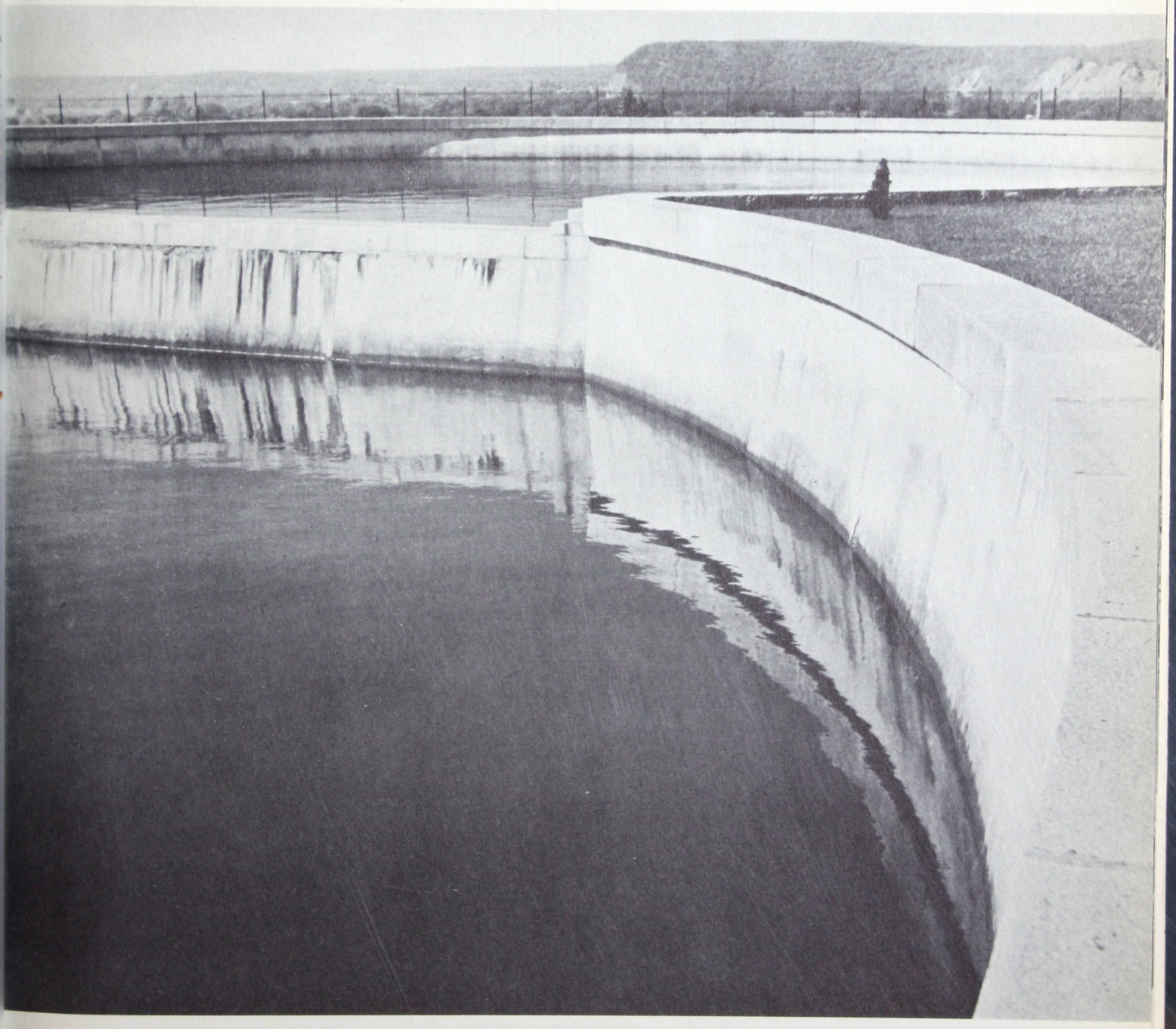


MAIN INTERLOCKING of Jacksonville Terminal's Myrtle Avenue plant is directly over this underpass, rebuilt under service in 1930; 300 train movements per day. Tracks were removed from bridge-deck in pairs; "I" beams thoroughly cleaned and encased in concrete; decks replaced with 'Incor'; slabs under traffic in 48 hours. "Not a crack or hair-break visible," writes J. L. Wilkes, President and General Manager of the Terminal Company.

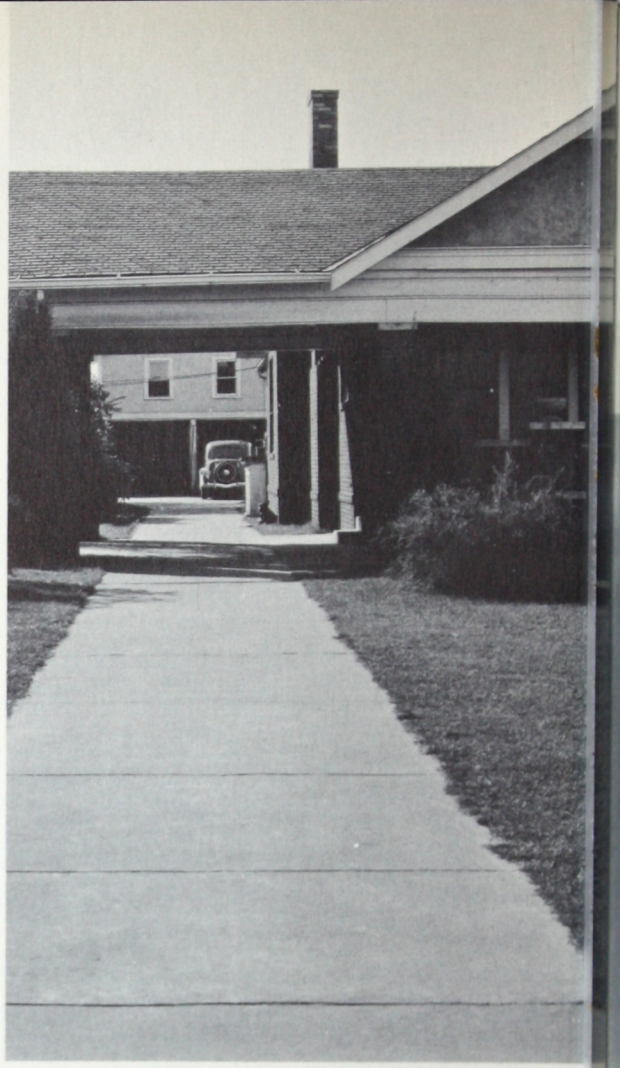


"TO MAKE SURE IT'S WATERTIGHT"

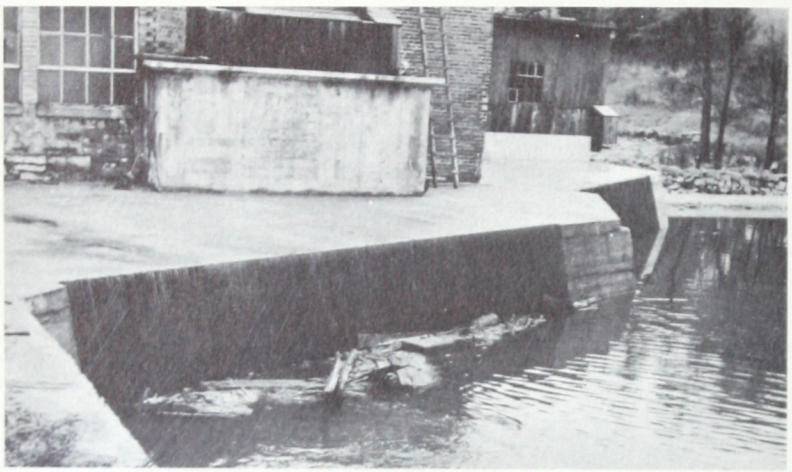
"To make sure of getting a watertight structure in a residential district and prevent leakage that might flood basements of nearby homes," was New Haven, Conn., Water Company's stated reason for using 'Incor' for Mill Rock Reservoir. In 5 years since completion, 'Incor' has made assurance doubly sure—concrete in excellent condition. Illustrating how 'Incor' helps assure watertightness—by curing thoroughly in short time concrete can be kept wet: 24 to 48 hours with 'Incor', instead of the all-but-impossible 7 to 10 days.

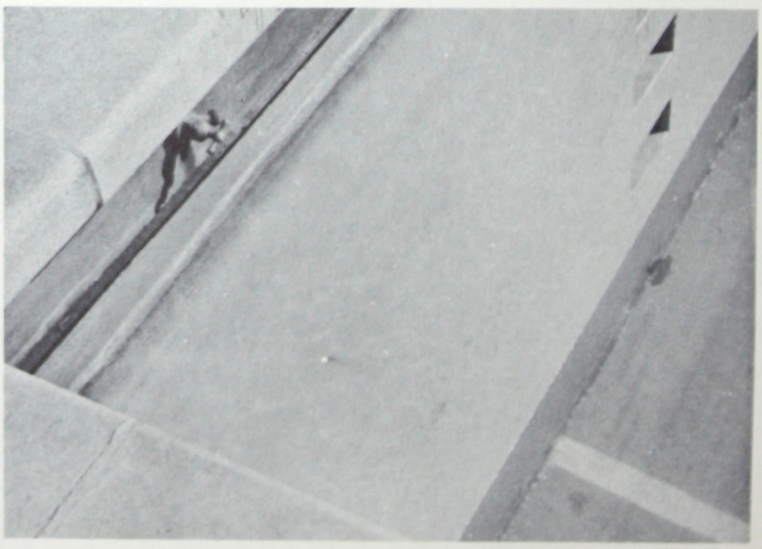


(Right) AN UNPAVED DRIVE, impassable due to heavy rains, prevented Mr. & Mrs. J. R. Hunter, Decatur, Ala., from occupying their new home. They paved it with 'Incor' and moved in 20 hours later. That was in 1929; today the drive is as sound as on the opening day.



(Below) WEATHER WAS COLD, but forms were released in 24 hours, when constructing concrete flume for Smith Paper Co., Lee, Mass., in 1931. Flume and 250-h.p. waterwheel were in service days sooner. 'Incor' provided stronger, denser, more watertight concrete, thoroughly cured in 24 to 48 hours, at a $500 saving. Bone-dry concrete protects paper stock in basement next to flume.





(Above) SALT-WATER POOL of Stamford, Conn., Yacht Club, built in 1930. No leakage, in spite of slight cracks in bottom, due to frost heaving as result of poor drainage.

(Left) LEAKY REFRIGERATOR TUNNEL, Kingan & Co., Indianapolis packing plant, gunited with 'Incor' in 1930; concrete had to harden quickly, before dammed-up water pressure became too great; 40° temperature had to be maintained. 'Incor' cured watertight, stopped water seepage, produced a dry tunnel and better refrigeration as well.

PILING AND PRODUCTS

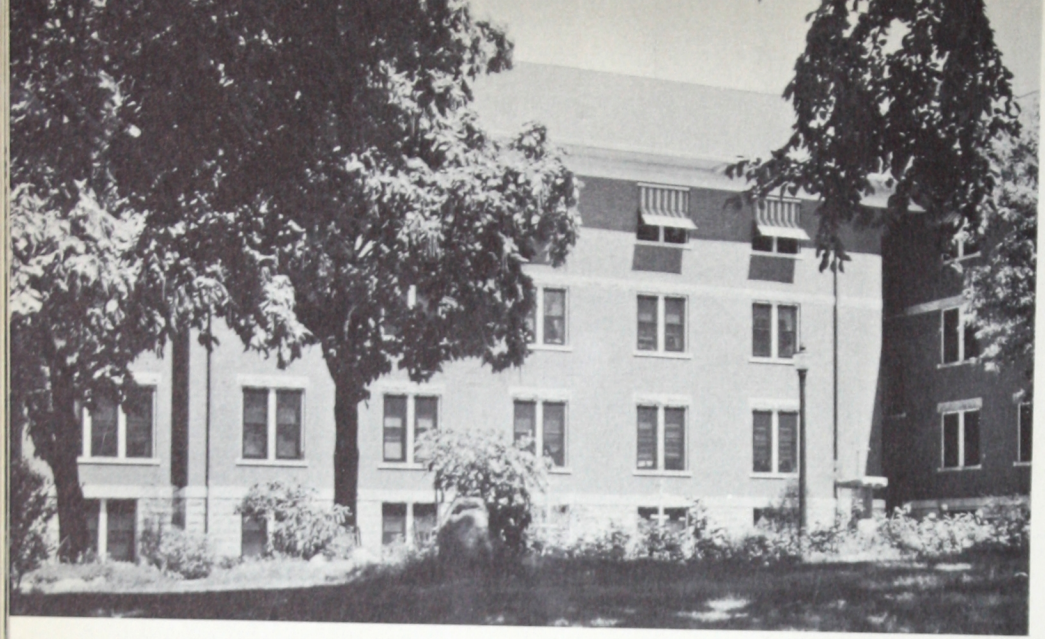
PILING DRIVEN 3 WEEKS EARLIER, curing period reduced 70%, saved 20 days in erecting Louisiana's 33-story Capitol building, Baton Rouge, housing all State government departments. Earlier occupancy saved $20,000 in rentals. Typical of 'Incor's advantages in pre-cast concrete work.

CAST IN 1929, 'Incor' transmission poles (below) are in excellent condition today—"Good as day it was cast," reads survey report. First poles built with 'Incor', tested in 48 hours, exceeded results previously attained at 6 months, so manufacturer switched to 'Incor'. Ultimate as well as early advantages amply justified the action.

DRIVEN WHEN 5 DAYS OLD—2 weeks sooner than ordinary concrete—'Incor' piling for Kansas City (Mo.) Power & Light Co. garage (above) withstood 90 blows from 5000-lb. hammer after pile-point reached bedrock. Shaft was sunk parallel to one of 495 piles, to get "low-down" on condition. Photo (below) shows pile tip, which had chewed its way into bedrock, Kansas City's "Calico Ledge."

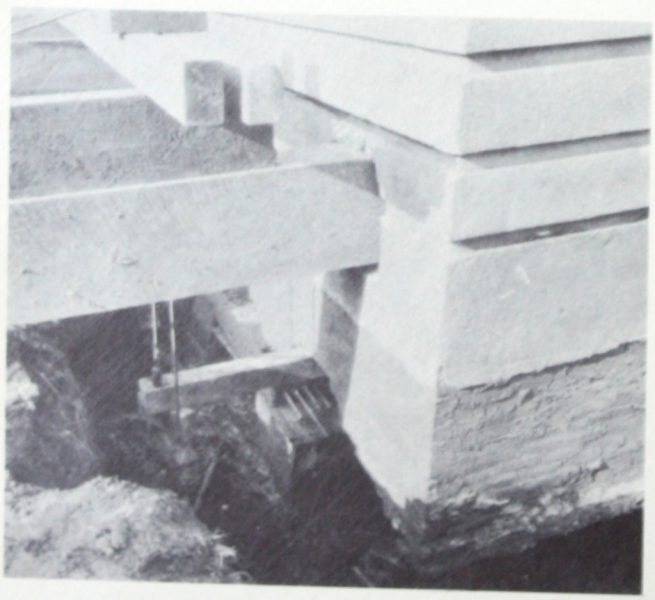
CONCRETE FRAME ERECTION

The frame is the only part of a building where work can be speeded up without increasing costs—and usually at substantial savings. This principle, established by 10 years' experience, is illustrated by various structures at Louisiana State University, Baton Rouge. In Field House, shown below, 'Incor' saved 30 days' job overhead and the cost of one form-set—total saving, $4200. This building gets strenuous wear; all concrete in perfect condition, after 7 years' service.



ON WALL-BEARING as well as concrete-frame stuctures, 'Incor' shows substantial savings. West wing of Methodist Home, Topeka, Kansas, erected 1929; one set of forms, jumped up from floor to floor in 24 to 48 hours. Saved one extra form set, and concrete kept ahead of bricklayers. Job completed 20 days sooner, with corresponding saving in overhead. Floors and ceilings in excellent condition.

(Below) DURING WINTER, 1928-29, Charleston, S. C., Museum of Natural History was underpinned with 'Incor' to stop settlement. Foundation was concreted in sections. By releasing timbering 8 days sooner, 'Incor' reduced timber requirements 75%, with corresponding saving on bolts and hardware. Quicker back-fill, faster clean-up of job site—reduced construction hazard. Recent inspection shows settlement and wall cracks successfully stopped.

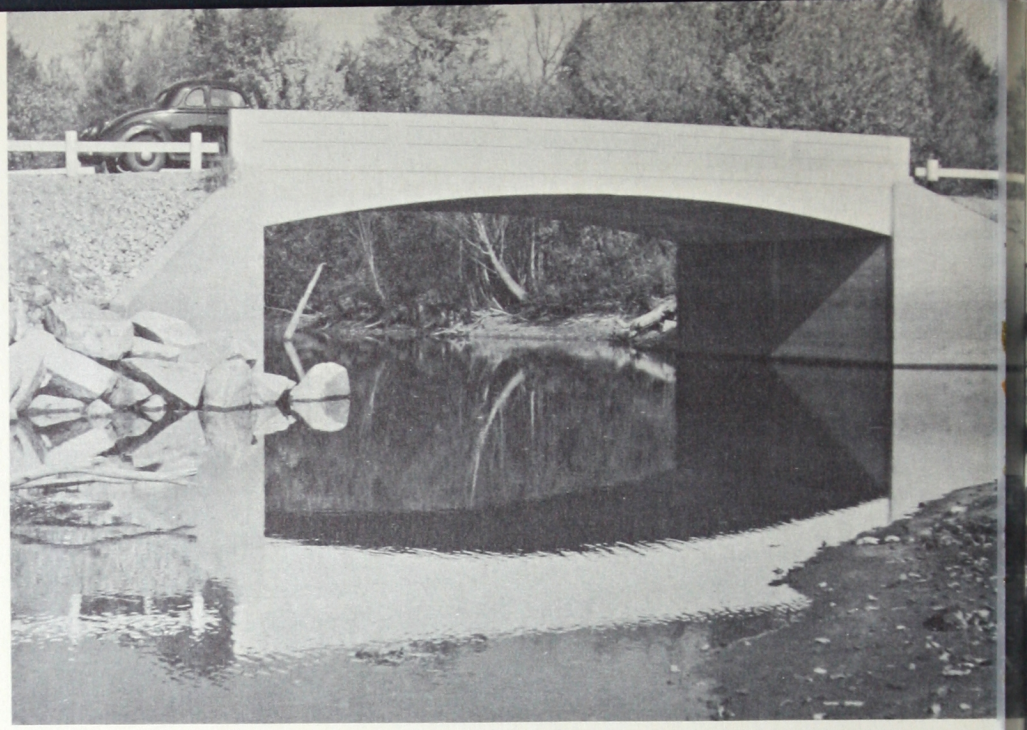


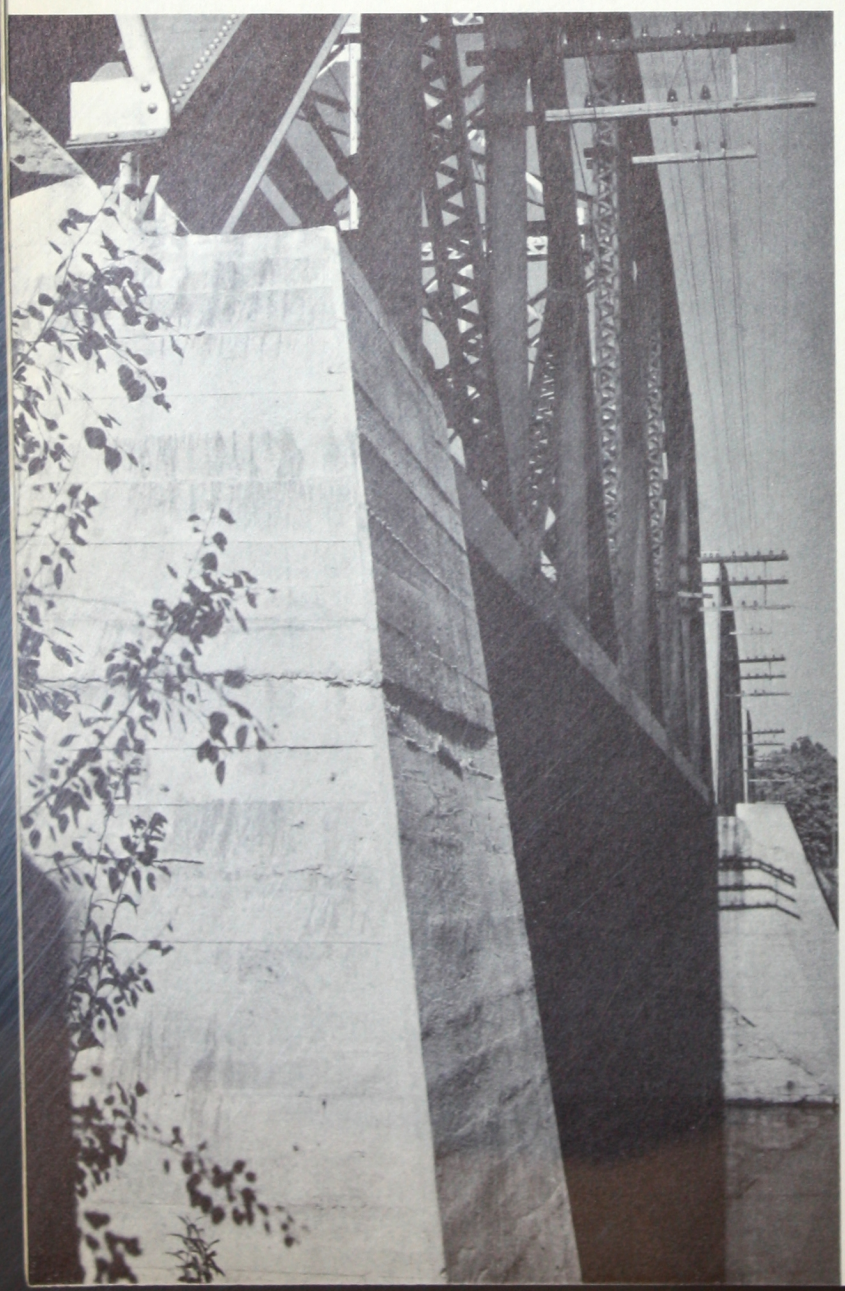
TO COMPLETE CONSTRUCTION BEFORE WINTER, foundation for addition to Boston Edison Electric Co.'s steam plant (right) had to be speeded. 'Incor' saved one month; 30 days' carrying charges on $750,000 investment alone exceeded extra cost of 'Incor'. And form requirements were reduced 75%, pile-handling costs by 20%, with 30-day saving in job overhead. Structure in excellent condition.

BRIDGES: BETTER CONCRETE AT LOWER COST

Arlington Memorial Bridge, Washington, D. C., where 'Incor', used in key-ways, made it possible to release forms 10 days sooner. Faster form re-use meant substantial savings. In 10 to 12 hours, 'Incor' concrete was strong enough to resist movement of steel falsework due to temperature change—avoiding serious structural hazard. At one and two days, 'Incor' provided strengths equal to 10 days with rich-mix ordinary concrete. Typical of 'Incor's ten-year record in bridge construction—lower costs, smoother operation, faster turnover. And better concrete, cured thoroughly in one-fifth the usual time.

'INCOR' SAVED 12 DAYS, $300—when used on abutments, footings and arch of Fowler River Bridge (right), Bristol, N. H., enabling contractor to avoid contract penalty. Placed in 1930, all concrete in excellent condition.



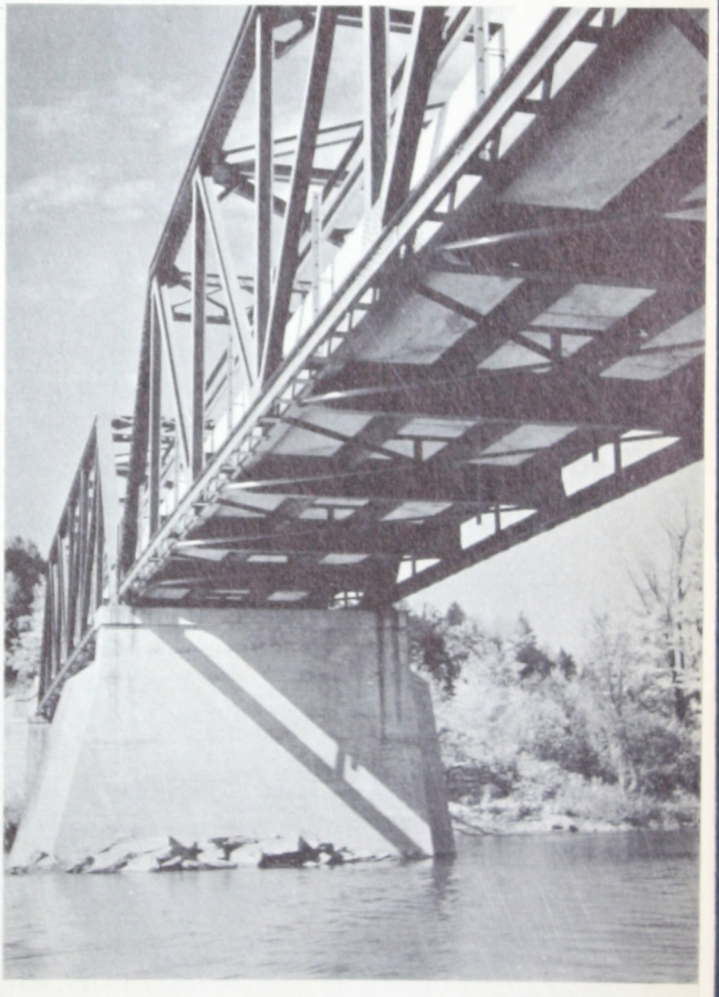


(Below) TRAFFIC TUNNEL, East Pittsburgh, Pa., built in 1929-30. 'Incor' used in sidewalls and arch-ring, saved form expense. Concrete in perfect condition, after supporting 80-ft. fill for 6 years. No scaling, no seepage. 8,000 vehicles, 80% trucks, pass over this fill daily.

(Left) TOLL BRIDGE between Charleston, N. H., and Springfield, Vt.; 'Incor', used in bridge seats and parapets, enabled contractor to start steel-erection 14 days sooner, with corresponding reduction in job overhead and earlier toll revenue. Inspection shows concrete in first-class condition.

COLD-WEATHER CONCRETING

WOBURN'S CITY HALL was concreted in typical Massachusetts winter weather, 1929. 'Incor' was used for floor slabs and roof. Concrete was self-supporting 8 days sooner, saving that much heat-protection on each floor; earlier re-use reduced form costs. Net saving, $517. Floor surfaces, cured thoroughly in 24 to 48 hours, are stronger, denser, more watertight—in perfect condition today.



CONCRETED IN MID-WINTER, 1928-29, 'Incor' saved 8 days' heat-curing on Twin Bridge (above), Middlesex, Vt., reduced job overhead through earlier completion. Close-up (left) shows concrete in first-class condition.

HENCE, THIS TIMELY SUGGESTION

A structural material is only as good as the men who use it. That being so, it follows that this ten-year record of the strength, durability and economy of 'Incor' 24-Hour Cement is, first of all, a tribute to the architects, engineers and contractors whose skill is here reflected. To these men we express thanks and appreciation. This decade of experience with 'Incor' may be summarized briefly, as follows:

1. **REDUCED CONCRETING COSTS**—Service-strong in 24 hours, 'Incor' does away with non-productive time waiting for concrete to harden, reduces forming costs, promotes smoother, steadier job operation. 'Incor' also moves into place easier, gives greater workability, helps to reduce placing costs.

2. **BETTER JOB-CURED CONCRETE**—'Incor' cures thoroughly in 24 to 48 hours, instead of 8 to 10 days. That means reduced curing costs and thorough curing in the short time concrete can be kept wet; better-looking concrete, with less finishing—stronger, denser, more watertight concrete.

3. **KNOWN DEPENDABILITY**—When 'Incor' was introduced, the construction industries accepted it with confidence, because behind 'Incor' stood Lone Star's record for outstanding quality and unvarying uniformity. Now 'Incor's ten-year service record merges with the 35-year record of Lone Star to provide an even greater measure of assured dependability.

Hence, this timely suggestion: Estimate the dollars-and-cents value of 'Incor's early strength and rapid curing. When it shows you a profit, use 'Incor'.* Otherwise, use Lone Star. You gain either way —because better cement makes better concrete.

*Reg. U. S. Pat. Off.

TWO PORTLAND CEMENTS to meet every structural need. Use 'Incor' when its dependable high early strength shows you a profit. Otherwise, use Lone Star. "You gain either way—because better cement makes better concrete."

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